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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/773,712  | 02/05/2004  | Richard T. Reel      | 4591C1              | 8309             |
| 22896   | 7590        | 11/03/2004           | EXAMINER            |                  |
| MILA KASAN, PATENT DEPT.<br>APPLIED BIOSYSTEMS<br>850 LINCOLN CENTRE DRIVE<br>FOSTER CITY, CA 94404 |             |                      | PUNNOOSE, ROY M     |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2877                |                  |

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/773,712

Applicant(s)

REEL, RICHARD T.

Examiner

Roy M. Punnoose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 66-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66-81 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/18/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Preliminary Amendment*

1. Applicant's preliminary amendment filed on October 18, 2004 is acknowledged. Accordingly, claims 1-65 have been cancelled, and new claims 66-81 have been added and entered into the records.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:
  - a. Both reference characters "302" and "304" (Figure 27) points at the hemispherical element.
  - b. Both reference characters "322" and "324" (Figure 27) points at the hemispherical element.
  - c. Reference character "372" (Figure 29) has been used to designate both hemispherical element and optical element.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Claims 71 and 79 recite of an aperture 112 positioned between the collection lens 14 and re-imaging lens 18. This feature is not shown in any of the figures presented in the instant application. Therefore, the aperture 112 and its position and/or placement in relationship to other elements of the invention must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. Corrected drawing sheets in compliance with (i) 37 CFR 1.84(p)(4), (ii) 37 CFR 1.83(a), and, (iii) 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing

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on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 66-73 are rejected under the judicially created doctrine of double patenting over claims 1, 27 and 29-31 of U. S. Patent No. 6,690,467 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

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The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

- a) All the limitations of claim 66 of the instant application, i.e., a plurality of sample holders, an aspherical optical element, the aspherical optical element comprising a flat surface facing the plurality of sample holders a curved surface facing away from the plurality of sample holders, and a radius of curvature, wherein the sample holders are positioned at an object plane of the aspherical optical element, wherein the object plane is within the radius of curvature, are disclosed in claim 1 of U. S. Patent No. 6,690,467.
- b) The limitations of claim 67 of the instant application, i.e., a collection lens positioned to receive and substantially collimate light from the curved surface of the aspherical optical element, are disclosed in claim 1 of U. S. Patent No. 6,690,467.
- c) The limitations of claim 68 of the instant application, i.e., a transmission grating configured to spectrally disperse the substantially collimated light from the collection lens, are disclosed in claim 1 of U. S. Patent No. 6,690,467.
- d) The limitations of claim 69 of the instant application, i.e., a re-imaging lens configured to receive the spectrally disperse light from the transmission grating and direct the spectrally dispersed light onto a light detection device, are disclosed in claim 1 of U. S. Patent No. 6,690,467.

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- e) The limitation of claim 70 of the instant application, i.e., the light detection device is a CCD, is disclosed in claim 27 of U. S. Patent No. 6,690,467.
- f) The limitations of claims 71-73 of the instant application, i.e., the aperture is positioned between the collection lens and re-imaging lens, wherein the aperture is configured to provide uniform light throughput and the aperture is in the shape of a cat's eye, are disclosed in claims 29-31 respectively of U. S. Patent No. 6,690,467.

6. Claims 74-81 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 27 and 29-31 of U. S. Patent No. 6,690,467 in view of Basiji et al (U.S. Patent No. 6,211,955).

Claims 1, 27 and 29-31 of U. S. Patent No. 6,690,467 discloses all the limitations of claims 74-81 of the instant application, except for the teaching of a non-hemispherical optical element in a system for collecting light emitted from a biological sample for accurately analyzing the characteristics of the sample.

Basiji et al (Basiji hereinafter) discloses a non-hemispherical optical element 32a, 32b (see col.8, lines 65+, Figures 1 and 2) in a system for collecting light emitted from a biological sample for accurately analyzing the characteristics of the sample.

In view of Basiji's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the hemispherical or aspherical optical element with a non-hemispherical optical element due to the fact that it would provide an improved and/or alternate way for collecting light emitted from a biological sample for accurately analyzing the characteristics of the sample.

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***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilby (U.S. Patent No.6,636,304) in view of what is commonly known in the art.

Claim 66 is rejected because:

- A. Gilby discloses a system comprising a sample holder 116, and an aspherical optical element 100, the aspherical optical element 100 comprising a flat surface 102 facing a sample holder 116, a curved surface facing away from the sample holder 116, and a radius of curvature, wherein the sample holder 116 is positioned at an object plane of the aspherical optical element 100, wherein the object plane is within the radius of curvature, for collecting light emitted from a sample for accurately analyzing the characteristics of the sample (see col.3, line 66 – col.4, line 46, Figure 4). However, Gilby does not explicitly disclose the use of the above system as applicable to a plurality of samples or for analyzing the characteristics of a plurality of samples.
- B. The Examiner takes Official Notice that it is commonly known in the art that if a system such as disclosed above by Gilby can be used to analyze a single sample, it can also be used to analyze a plurality of samples for determining the characteristics of a plurality of samples.

C. In view of what is commonly known in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gilby's teachings to analyze a plurality of samples due to the fact that it would provide an improved system for collecting light emitted from a plurality of samples for accurately analyzing the characteristics of the samples.

9. Claim 67 is rejected for the same reasons of rejection of claim 66 above, and additionally because Gilby further teaches the use of a collection lens 404 positioned to receive and substantially collimate light from the curved surface of the aspherical optical element 100 (see Figure 4).

10. Claims 68-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilby (U.S. Patent No. 6,636,304) in view of Basiji et al (U.S. Patent No. 6,211,955).

11. Claim 68 is rejected for the same reasons of rejection of claims 66 and 67 above, and additionally because Basiji teaches of a system comprising a transmission grating 36 configured to spectrally disperse the substantially collimated light from the collection lens 32a, 32b (see Figure 2).

In view of Basiji's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a transmission grating into Gilby's system to spectrally disperse the substantially collimated light from the collection lens to provide an improved system for collecting light emitted from a plurality of samples for accurately analyzing the characteristics of the samples.

12. Claim 69 is rejected for the same reasons of rejection of claim 68 above, and additionally because Basiji teaches a system comprising a re-imaging lens 40a, 40b (see Figure 2) configured



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to receive the spectrally disperse light from the transmission grating 36 and direct the spectrally dispersed light onto a light detection device 44.

13. Claim 70 is rejected for the same reasons of rejection of claim 69 above, and additionally because Basiji teaches a system comprising a CCD detector (see col.9, lines 39-40) for collecting light emitted from a sample for accurately analyzing the characteristics of the sample.

14. Claims 71 and 72 are rejected for the same reasons of rejection of claim 70 above, and additionally because Basiji teaches a system comprising an aperture 50 to provide uniform light throughput, said aperture 50 positioned between the collection lens 48 and re-imaging lens 40 (see Figure 4) for collecting light emitted from a sample for accurately analyzing the characteristics of the sample.

15. Claim 73 is rejected for the same reasons of rejection of claims 71 and 72 above, and additionally because, in view of Basiji's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an aperture of any desired shape to provide uniform light throughput in a system for collecting light emitted from a sample for accurately analyzing the characteristics of the sample.

16. Claims 74-81 are rejected because the limitations of claims 74-81 are the same as that of claims 66-73 respectively, except that the hemispherical optical element of claim 66 is substituted with a non-hemispherical optical element.

Basiji's teaches the use of a non-hemispherical optical element 32a, 32b (see Figure 2) in a system for collecting light emitted from a sample for accurately analyzing the characteristics of the sample.

In view of Basiji's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a non-hemispherical optical element into Gilby's system to provide an improved and/or alternate system for collecting light emitted from a plurality of samples for accurately analyzing the characteristics of the samples.

### ***Conclusion***

17. Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the **next reply** after the Office action in which the well-known statement was made.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**.

The examiner can normally be reached on 9:00 AM - 5:30 PM.

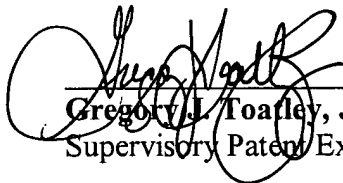
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2800 ext.77**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Roy M. Punnoose**  
Patent Examiner  
Art Unit 2877  
October 30, 2004



  
**Gregory J. Toatley, Jr.** *AV 2877*  
Supervisory Patent Examiner